

1. A method for incorporating and accessing semi-structured data within an LDAP environment, the method comprising the steps of:
  - a) transforming the semi-structured data into LDAP data;
  - b) converting a query, written in a semi-structured query language for operation on semi-structured data, into a LDAP query; and
  - c) accessing said LDAP data with said LDAP query.
2. The method of claim 1, wherein said semi-structured data comprises XML data.
3. The method of claim 2, wherein said query written in a semi-structured query language is an XPath query.
4. The method of claim 2, wherein said XML data comprises WML data.
5. The method of claim 1, wherein step a) comprises the steps of:
  - a1) using attributes to store information about individual semi-structured nodes; and

09990592 112301

a2) assigning a distinguishing name to each of said data nodes to define a unique location in an LDAP hierarchy at an instance level.

6. The method of claim 5, wherein said semi-structured data is transformed to comprise a node, an element and an attribute.
7. The method of claim 6, wherein said node, said element and said attribute each comprise an oc attribute an oid attribute, and a name.
8. The method of claim 7, wherein said element further comprises an order.
9. The method of claim 8, wherein said attribute further comprises a first value.
10. The method of claim 9, wherein said element further comprises a second value.
11. The method of claim 1, wherein step b) comprises the step of extending a scope to permit queries in an upward and downward direction.

09990592 112301  
10E211 26506660

12. The method of claim 5, wherein step b) comprises the step of converting said semi-structured data query into a plurality of sub-queries.
13. The method of claim 12, wherein said plurality of sub-queries are executed in parallel.
14. The method of claim 11, wherein said scope is one of restricted to a first node, restricted to a first level of nodes, restricted to all nodes below a base node under action of a filter expression, restricted to a parent node, restricted to sibling nodes, and restricted to all ancestors up to a root node.
15. The method of claim 12, further comprising executing at least one cache answerability algorithm at a level of said sub-queries.
16. The method of claim 12, wherein said sub-queries comprise a main query and secondary queries.
17. The method of claim 12, further comprising restructuring said sub-queries into a second main query and at least one refinement query.

18. The method of claim 12, further comprising partial query evaluation of at least one of said sub-queries.
19. The method of claim 12, further comprising pre-processing of at least one of said sub-queries.
20. A device for incorporating and accessing semi-structured data within an LDAP environment, comprising:
- means for transforming semi-structured data into LDAP data;
  - means for converting a query, written in a semi-structured query language for operation on said semi-structured data, into an LDAP query; and
  - means for accessing said LDAP data with said LDAP query.
21. A storage medium written with machine readable instructions for carrying out the method steps of claim 1.

09990592 "112301